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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,652	03/16/2004	Narumi Koga	501152.20026	3942

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EXAMINER	
SHAH, MANISH S	

ART UNIT	PAPER NUMBER
2853	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/802,652	KOGA ET AL.	
	Examiner	Art Unit	
	Manish S. Shah	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13 and 15-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13 and 15-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The indicated allowability of claim 14 is withdrawn in view of the newly discovered reference(s) to Satoh et al. (# US 2003/00061967). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 13 & 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouchi et al. (# US 2001/0045175) in view of Fukui. (# JP 2000-191973) and Satoh et al. (# US 2003/0061967).

Ouchi et al. discloses a water-based ink for ink jet recording including a dispersible coloring agent ([0067]-[0071]); a propylene glycol ether ([0063]); and a surfactant ([0071]). They also disclose that the amount of the propylene glycol ether is 0 to 30% by weight ([0063]) and surfactant is added in amount from 0.1 to 3% (see Examples). They also disclose that the content ratio by weight of propylene glycol ether/surfactant is 5 to 10 (see Examples). They also disclose an inkjet printer including an inkjet head, which has an ink flow passage, and the ink cartridge to accommodate the ink ([0076]).

Ouchi et al. discloses all the limitation of the water-based ink except that (1) the surfactant represented by the general formula: R_1-O-(CH_2CH_2O)n-SO_3M, wherein n represents and integer of 2 to 4, R1 represents an alkyl group having a number of carbon atoms of 12 to 15 and M represents Na or triethanolamine. (2) The propylene glycol ether is dipropylene glycol propyl ether.

Fukui teaches that the ink composition having the good storage stability characteristics, the ink composition includes a surfactant, which has a general formula R-O-(CH_2CH_2O)$_n$-SO_3M, wherein n is 2 to 50, R is alkyl group having 8 to 20 carbon atom, and M is organic amines or alkanolamines (see Abstract; [0008]-[0010]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Ouchi et al. by the aforementioned teaching of Fukui in order to have the good storage stability ink composition.

Satoh et al. teaches that to have the deterioration free printed image, ink composition comprises 1 to 5% of dipropylene glycol propyl ether ([0024]-[0025]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Ouchi et al. by the aforementioned teaching of Satoh et al. in order to have the deterioration free high quality printed image.

3. Claims 13 & 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kappele et al. (# US 6063834) in view of Fukui. (# JP 2000-191973) and Satoh et al. (# US 2003/0061967) .

Kappele et al. discloses a water-based ink for ink jet recording including a dispersible coloring agent (column: 6, line: 3-67); a propylene glycol ether (column: 4, line: 38-45); and a surfactant (column: 4, line: 43-50). They also disclose that the amount of the solvent is added is preferably 10 to 60% by weight (column: 8, line: 5-15) and surfactant is added in amount from 0.1 to 5% (see Examples). They also disclose that the content ratio by weight of propylene glycol ether/surfactant is 5 to 10 (see Examples). They also disclose an inkjet printer including an inkjet head, which has an ink flow passage, and the ink cartridge to accommodate the ink (column: 8, line: 30-50).

Kappele et al. discloses all the limitation of the water-based ink except that the surfactant represented by the general formula: R_1-O-(CH_2CH_2O)n-SO_3M, wherein n represents and integer of 2 to 4, R1 represents an alkyl group having a number of carbon atoms of 12 to 15 and M represents Na or triethanolamine.

Fukui teaches that the ink composition having the good storage stability characteristics, the ink composition includes a surfactant, which has a general formula R-O-(CH_2CH_2O)$_n$-SO_3M, wherein n is 2 to 50, R is alkyl group having 10 to 20 carbon atom, and M is organic amines or alkanolamines (see Abstract; [0008]-[0010]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Kappele et al. by the aforementioned teaching of Fukui in order to have the good storage stability ink composition.

Satoh et al. teaches that to have the deterioration free printed image, ink composition comprises 1 to 5% of dipropylene glycol propyl ether ([0024]-[0025]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Ouchi et al. by the aforementioned teaching of Satoh et al. in order to have the deterioration free high quality printed image.

4. Claims 13, 15-16 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (# US 5888287) in view of Fukui. (# JP 2000-191973) and Satoh et al. (# US 20030061967).

Brown et al. discloses a water-based ink for ink jet recording including a dispersible coloring agent (column: 2, line: 39-60); a propylene glycol ether (column: 2, line: 1-15); and a surfactant (column: 2, line: 20-40). They also disclose that the amount of surfactant is added in amount from 0.1 to 3% (see Examples).

Brown et al. discloses all the limitation of the water-based ink except that the surfactant represented by the general formula: R_1-O-(CH_2CH_2O)n-SO_3M, wherein n represents and integer of 2 to 4, R1 represents an alkyl group having a number of carbon atoms of 12 to 15 and M represents Na or triethanolamine.

Fukui teaches that the ink composition having the good storage stability characteristics, the ink composition includes a surfactant, which has a general formula R-O-($CH_2CH_2O)_n$-SO_3M, wherein n is 2 to 50, R is alkyl group having 10 to 20 carbon atom, and M is organic amines or alkanolamines (see Abstract; [0008]-[0010]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Brown et al. by the aforementioned teaching of Fukui in order to have the good storage stability ink composition.

Satoh et al. teaches that to have the deterioration free printed image, ink composition comprises 1 to 5% of dipropylene glycol propyl ether ([0024]-[0025]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Ouchi et al. by the aforementioned teaching of Satoh et al. in order to have the deterioration free high quality printed image.

5. Claims 19 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouchi et al. (# US 2001/0045175) in view of Fukui. (# JP 2000-191973) and Satoh et al. (# US 2003/0061967) as applied to claims 13 & 15-18 above, and further in view of Horii et al. (# US 6871941).

Ouchi et al. and Fukui discloses all the limitation of the ink composition except that the ink flow passage formed of an Ni-Fe alloy.

Horii et al. teaches that to have a high quality print head, inkjet head has a ink flow passage is formed of an Ni-Fe alloy (column: 14, line: 50-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink passage of Ouchi et al. as modified by the aforementioned teaching of Horii et al. in order to have high quality print head.

6. Claims 19 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kappele et al. (# US 6063834) in view of Fukui. (# JP 2000-191973) and Satoh et al. (#

US 2003/0061967) as applied to claims 13 & 15-18 above, and further in view of Horii et al. (# US 6871941).

Kappele et al. and Fukui discloses all the limitation of the ink composition except that the ink flow passage formed of an Ni-Fe alloy.

Horii et al. teaches that to have a high quality print head, inkjet head has a ink flow passage is formed of an Ni-Fe alloy (column: 14, line: 50-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink passage of Kappele et al. as modified by the aforementioned teaching of Horii et al. in order to have high quality print head.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(1) Kato et al. (# US 6679598) discloses that the ink composition including pigment, dipropylene glycol propyl ether (see Abstract, see Claims).

(2) Yatake (# US 6004389) discloses that the ink composition including pigment, dipropylene glycol propyl ether (see Abstract).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Manish S. Shah/
Primary Examiner
Art Unit 2853

/MSS/